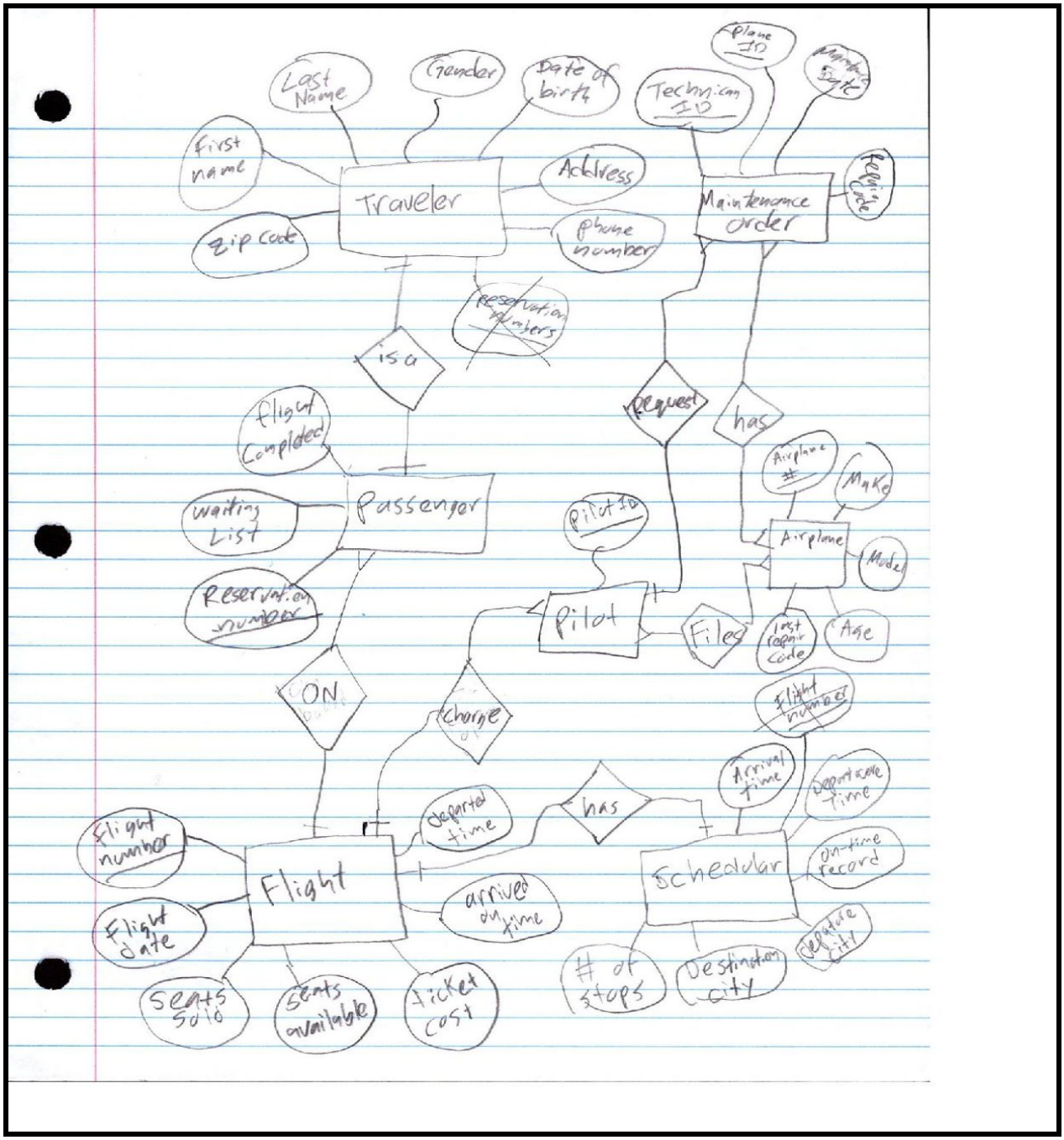
Christian Campos, Kyle Dean
CS166 Project Phase 1
Group - 166th Database

Assumptions

For phase 1 of this project, we decided to do the ER diagram individually to make sure we each understood the concepts. After we each created our ER diagrams, we met up to talk about our diagrams and assumptions. After we talked to each other about our assumptions on our ER diagrams we concluded that we both got similar results. Since we had similar results we decided to go with Kyle's ER diagram. Below we each talk about our initial assumptions:

Christian Campos:

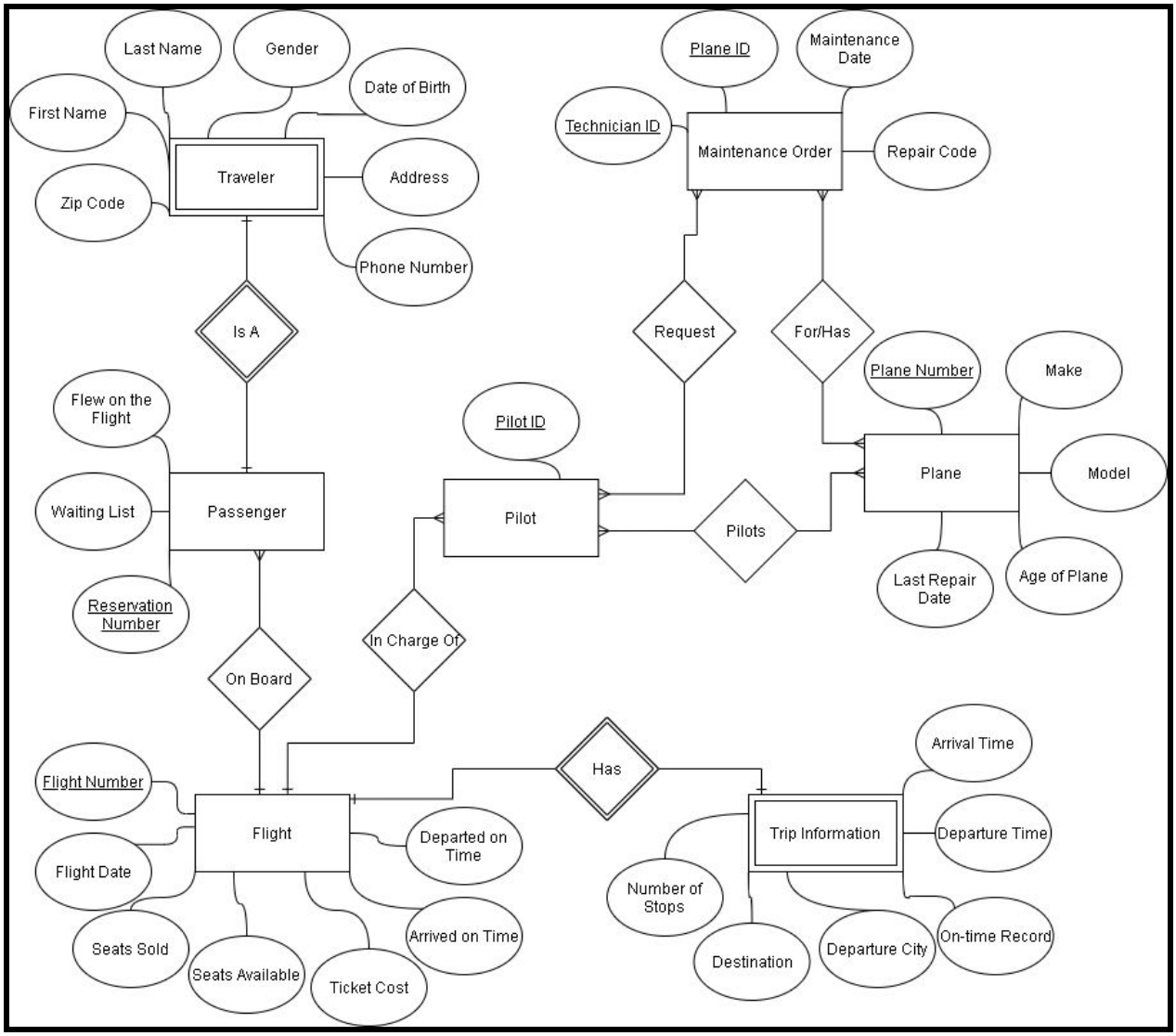
My first attempt at the airplane airline system was to create six entities: flight, passengers , maintenance order , pilot , traveler, and airplane. As I proceed in connecting the entities, I realized that I needed one more entity. I removed certain attributes from the flight entity and created an schedular entity to keep track of flight trips information. Now, I have seven entities in my diagram. In doing so , I made my ER diagram to be more readable and simple. The primary keys are underlined in my ER diagram. I modify my ER diagram more with Kyle's suggestion of his relationship. As a result, my relationship is similar to Kyle's relationship ER diagram. I decided to choose Kyle Dean's ER diagram to be our final product for phase 1.



-- Christian Campos -- ER Diagram --

Kyle Dean:

My initial assumptions was to create an entity for only the airline management, customers, maintenance staff, and pilots. After attempting to do so, I was not able to fulfill all the necessary requirements. I needed to add more entities with specific attributes to serve the needs of the initial entities that I thought were only required: airline management, customers, maintenance staff, and pilots. I created a traveler entity which held specific information for each traveler such as their first/last name, gender, date of birth, etc. The traveler entity has a 'is a' relationship with the passenger entity who has the data pertaining to reservation number, waiting list (if they are on a waiting list for a flight), and if they flew on the flight already. For the maintenance entity, I made two attributes primary keys: technician ID and plane ID. The reason why I did this is because I made the assumption that each technician works on a specific plane.



At first I was confused about how to solve the 4th requirement for ‘Customers.’ I do not know if it is correct, but I had the idea of checking the amount of seats available on the flight and if it was equal to 0 the passenger would be placed on the waitlist. Another thing I am unsure of is the requirement for ‘Pilots.’ I believe my ER diagram can solve this requirement since the ‘Pilot’ entity has a many-to-many relationship with the ‘maintenance order’ entity.

FINAL ER DIAGRAM